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Exploring the Knowledge and Perceptions of Elementary and Middle School Staff with Regard to the Utilization of a Dental Hygienist in a School Setting

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Exploring the Knowledge and Perceptions of Elementary and Middle School Staff with Regard to the Utilization of a Dental Hygienist in a School Setting

In Fulfillment of Honors
by
Hannah E. Fender
The Honors College
East Tennessee State University
to
Dr. Deborah Dotson
Dental Hygiene
April 15, 2019

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Hannah Fender Date

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Dr. Deborah Dotson, Thesis Mentor Date

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Dr. Tabitha Fair, Reader Date

Exploring the Knowledge and Perception of Elementary and Middle School Staff with Regard to the Utilization of a Dental Hygienist in a School Setting

Background

As a young student, I can recall a dental hygienist coming to the elementary school I attended to perform dental examinations, sealants and fluoride treatments to the children, myself included. This was my first and last visit from a dental hygienist in a public-school setting. I attended the dentist regularly for my biannual cleanings but was never shown proper hygiene instruction, such as brushing and flossing techniques, by a dental health care professional. While finishing my Associate Degree in Science with a focus in Pre-Dental Hygiene, I was accepted into East Tennessee State University's Dental Hygiene Program. In my first semester in the program, I was then taught the correct hygiene techniques that I desperately needed as a child. This was the first time I had been taught how to correctly brush and floss my teeth. Through personal experience, I asked myself "Was I alone?" Could there be others who have experienced the same oral health neglect in adolescent years as I had? I question why I was never taught these crucial dental hygiene instructions in elementary or middle school, wondering why they were overlooked. If I had never been taught this in ETSU's dental hygiene program, would I have even been shown?

In elementary and early middle school age groups, children have a mixed dentition. Having a mixed dentition means that both deciduous and permanent teeth are both present (Bath-Balogh & Fehrenbach, 2011). With an ever-changing dentition, children become more susceptible to developing caries or cavities. Some contributing factors include a lack of oral health knowledge and how to remove biofilm daily along with a high carbohydrate diet. Carbohydrates or starches become easily lodged in interproximal areas between teeth. With improper removal of food and bacteria from the mouth, cavities can begin to form by acid destruction of the tooth surface. Bacteria creates a plaque biofilm over the tooth that can grow

and mature because of neglect. Plaque biofilm thrives above the gingival margin, supragingival, and below the gingival margin, subgingival, in the sulcus that surrounds the tooth. With advancing biofilm maturity, the gingiva becomes inflamed and irritated due to the accumulation and production of bacteria. In response, the body's immune system increases its white blood cell count to fight the progression of bacteria entering the tissue. Without daily removal of dental biofilm and biannual cleanings by a dental health care professional, the body becomes more susceptible to inflammation.

In the public-school system, from middle to elementary age groups, children are at an increased risk of disease due to carious lesions and gingivitis. "According to the 2000 Surgeon General's report, tooth decay is the most common chronic childhood disease in the United States. Every year, children lose an estimated 52 million school hours due to dental-related problems" (Larsen, C. D., Larsen, M. D., Handwerker, Kim, & Rosenthal, 2009, p.117). With the eruption of permanent teeth and growing dentition, children and adolescents are more likely to develop these dental complications. Through neglect in oral hygiene among students, a significant number of children develop dental issues that cause their school performance to suffer. "A total of 1049 school days were missed by 2120 children for reasons related to dental care, an average of 0.49 days per child. Of these missed days, 182 (17.3%) were the result of dental pain or infection" (Jackson, Vann, Kotch, Pahe & Lee, 2011, p.1902). Because of pain caused by dental related issues, such as progressive dental caries or infection within the tissue, children are more likely to experience a decline in school attendance. Dental insurance and the lack of health care low income families receive play a role in a child's attendance in school. "Uninsured children were more likely than were those with private insurance to miss school for dental pain, but they were less likely to miss school for routine dental care. Children with good,

fair, or poor oral health were nearly 3 times more likely than were children with very good or excellent oral health to miss school as a result of dental pain" (Jackson et al., 2011, p.1902).

Dental and oral health care contributes to a significant part of overall health. The oral cavity is a breeding ground for bacteria to thrive. It also acts as a gateway to understanding and identifying health related issues that may be progressing in other areas of the body. For example, periodontal disease in adults, which destroys alveolar bone, periodontal ligaments, gingival tissue, and causes root exposure, has been associated with serious health issues. Some of these health problems include diabetes, coronary artery disease, and immune disorders (Gavaza, Wonha, Rogers, Fry-Bowers, & Mosavin, 2017, p.59). With the fluctuation of blood glucose in the body, patients with uncontrolled diabetes have an increased risk of destruction to the periodontium called periodontitis. With the development of periodontal disease, the body increases its white blood cell count and causes an exaggerated response to the bacteria that is present. Although inflammation can be managed and is reversible, periodontal tissue destruction is not. Therapeutic treatment or non-surgical dental procedures should be performed by a dental hygienist to slow the progression of the disease (Gehrig & Willmann, 2016). In combination with treatment, patients should maintain appropriate home care. Through adequate dental hygiene practices along with visiting the dentist biannually, overall systematic health can improve.

Literature Review

Dental health care professionals, including dental hygienists, work to improve upon public oral health through educational practices, preventative methods, and dental procedures. Dental hygienists are able to provide care in multiple job settings that cover an array of patients.

Dental hygienists work in private dental practices, health departments, or in a school setting. "Dental hygienists in local communities are working through the public health department providing oral health education, preliminary screenings and preventive care services" (Olmsted, Rublee, Zurkawski, & Kleber, 2013, p.300). As a part of care, dental hygienists can perform intra and extra oral evaluations to check for tissue abnormalities and growths, scaling or removal of plaque biofilm and calculus, and provide patients with topical treatments such as fluoride, or sealants. Following provided care, referral to a dental office or a physician may be needed depending on the patient's needs. "Once individuals are screened, and preventive health care services provided, public health dental hygienists follow a consultation and referral model for addressing restorative care needs" (Olmsted et al., 2013, p.300). Dental hygienists provide patients with preventative care to preserve the periodontium and halt disease progression in patients with active disease. Educating patients of the risks and providing appropriate care can benefit the individual long term.

Dental hygienists can be utilized to provide care to adolescents and young adults in a school-based setting. "There is growing consensus among governmental and professional organizations that changing the profile of dental hygienists to increase their involvement in public health can help improve access to oral health care. Currently, 29 states allow dental hygienists: Direct access to initiate treatment based upon their assessment of a patient's needs without specific authorization of a dentist" (Simmer–Beck et al., 2011, p.182). Dental hygienists, in some locations and within certain limitations, are now able to extend care to a wider array of patients through passed legislation allowing practice without an onsite dentist. In Kansas, for example, dental hygienists are able to work in school settings, without a dentist, to provide care and outpatient referrals for children. School nurses or health care providers in a school setting

have found that more children and adolescents are suffering from dental complications, such as caries. “Nurses at each school reported seeing children due to tooth pain and referring children to a dentist each week. The Smiles Across Kansas 2007 Update, a comprehensive oral health survey of Kansas third graders, reported 21% of children had untreated decay and 36% had dental sealants” (Simmer-Beck et al., 2011, p.187). As a result, children and adolescents suffer from neglected dental care and proper treatment. Transitioning from a deciduous to permanent dentition, a child’s oral cavity is ever changing and expanding. They are at a higher risk for developing decay and progressive disease in the periodontium. Through a growing cooperation and extension of care between the dental and educational field, children are able to receive preventative care and halt active disease. “Dental educators, including those in dental schools, allied dental programs and advanced education programs, are encouraged to strengthen and build partnerships within these communities to ensure a seat at the table as broader discussion about the nation’s health care workforce ensue” (Simmer-Beck et al., 2011, p.188).

Children and adolescents are among the highest targeted age group to suffer from dental caries. “The US Surgeon General reports that dental caries is the single most common chronic disease of childhood, occurring five to eight times as frequently as asthma, the second most common chronic disease in children” (Moon, Farmer, Tilford, & Kelleher, 2003, p.242). Consumption of foods high in sugar and carbohydrates aids in disease progression. “The National Diet and Nutrition Survey shows that sugar accounts for 13% of children’s daily calorie intake, 15% for teenagers and 12% for adults – the official recommended limit is no more than 5%” (Windell, 2018, p.31). Without the proper daily removal of plaque biofilm in combination with a poor diet, the risks of developing dental caries increase.

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Target populations, such as underserved or rural areas, are at a higher risk for dental complications and serious oral health problems. Dental health care professionals are a valuable tool that can be utilized to aid in educating and providing care to children and adolescents in these communities. “Additionally, oral health care is the most prevalent unmet health need among U.S. children” (Colaizzi, Tomar, Urdegar, & Kass, 2015, p.180). In underserved communities, dental care is not easily accessible. Most dental offices are located in metropolitan areas, leaving rural and intercity areas underserved. The costs of dental treatment and lack of dental insurance also contribute to unmet dental needs. “According to a 2011 survey conducted by Lake Research Partners for W.K. Kellogg Foundation, those most likely to not have a place to receive regular dental care include those with incomes less than $30,000, who lack dental insurance, who have a high school diploma or less education, or who are Latino or African American" (Siruta et al., 2014, p.289). “Having public assistance or no health insurance was related to absences caused by dental pain or infection. Uninsured children were more likely than were those with private insurance to miss school for dental pain, but they were less likely to miss school for routine dental care” (Jackson et al., 2011, p.1902). Children and adolescents should be examined and have their teeth cleaned twice a year. Due to insufficient finances, children may not have this opportunity depending on whether or not the child’s school system is partnered with a dental hygienist. Integrating the involvement of a dental hygienist into a school system allows for dental and oral health care needs to be addressed.

Methods

In order to explore the knowledge and perceptions of school staff with regard to the utilization of a dental hygienist in a school setting, I constructed a survey (attachment A) that was administered to my target group of school system employees. “Surveys are instruments used

to quantitatively evaluate subjective data. Through the addition of open-ended questions, qualitative data can also be obtained" (Hammer, 2017, p.157). An informed consent was signed by the individuals surveyed before the survey was administered. My project was approved by the Institutional Review Board at East Tennessee State University. I hand delivered the surveys. Individuals selected to receive the survey included principals, school nurses, and some teachers at the elementary and middle school levels. Individuals in these particular roles were chosen for their specific insights into the needs of their students. The purpose of conducting this survey included: insight into the individual's level of knowledge in oral health, and their perception of dental hygiene, their view of child oral health and how it corresponds to the school system, and help to further the understanding of why dental hygienists are not utilized more within school systems.

Results

The surveys [attachment A] were distributed along with informed consent [attachment B] to Unicoi County Elementary School and Unicoi County Middle School. The individuals who received the surveys were each school's principal, nurse, physical education/wellness teacher, science teacher or instructor who taught K-5. In total, eight faculty and staff members were surveyed from these two schools. At Unicoi County Elementary School, the principal and myself had previously discussed who would be receiving the surveys. I left the surveys with the principal and was instructed to pick them up at a later date. At Unicoi County Middle School, the individuals surveyed met in the school's conference room where I distributed the surveys to each individual, waited until each survey was completed and then they were returned back to me.

The following are the results of the surveys completed by the individuals. Each question is listed followed by the answers of the faculty and staff.

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Question 1: Which of the following are services that a dental hygienist could perform in school? Check all that apply. [dental screenings, referrals to dental offices or clinics, dental health education presentations, apply sealants, apply fluoride, provide nutrition education with regard to prevention of cavities, tobacco prevention education, tobacco cessation assistance, provide dental health education for parents and community]

- Two selected everything except tobacco prevention education; tobacco cessation assistance
- One other selected everything except tobacco cessation assistance, N/A was written beside tobacco cessation assistance
- One selected everything except apply fluoride; tobacco cessation assistance; provide dental health education for parents and community
- Four chose all of the services listed.

Question 2: Do you see a need for a dental hygienist at your school? Yes, No, If no why?

- All eight individuals surveyed answered yes.

Question 3: Would you be in support of having a dental hygienist assigned to your school? Yes or No

- All eight individuals surveyed answered yes.

Question 4: What are your thoughts on having both a dental hygienist and nurse in your school's health clinic?

- It would be very beneficial to have both in the school. The school nurse cannot be an expert in all areas, but having a dental hygienist on campus would allow them to focus on just the dental health of the students.
- Providing students with as many services & resources as possible is a goal of our school and system. When talking about "whole child" education and care, these two resources would be invaluable.
- I think it would be a good collaboration of skills; I don't think it would be needed on a full-time basis. And most clinics are very limited on space.
- We have a nurse. Dental hygienist would be helpful. So many of our children do not see a dentist
- I believe have a dental hygienist visit our school each year would benefit all students. A full-time nurse is a must.
- We could prevent some issues early on.
- I think it is a good idea. I feel our students have a need for both.
- I feel that it would be very beneficial for our students.

Question 5: What barriers do you foresee with the implementation of dental hygiene services in public schools?

- Space to work (office/equipment area/etc.), permission from parents, student and parent fears/concerns, liability
- Financial constraints, location for services within school
- Cost, space
- Children's fears, parents' hesitation

- Unicoi Elementary does not have the space to provide dental services. Who will take care of the cost?
- Funding
- Pay
- Scheduling, costs

Question 6: What are your thoughts of oral health compared to overall health?

- Oral health is a huge part of the overall health of a student. Teeth problems can cause all kinds of medical issues if they are not cared for in a timely manner.
- Oral health can help prevent more overall health issues, such as infections. Also, oral health is often linked to arthritis, which is very important to students at this age.
- One is just as important as the other & one influences the other.
- Very important for health & self confidence
- Both are very important and necessary. Poor oral health creates other health issues.
- Very important
- Extremely important
- I feel it is often overlooked.

Question 7: Do you currently have any interaction with a dental hygienist at your school? Yes or No

- Five answered yes.
- Three answered no.

Question 8: Do you currently have a dental hygienist coming to your school to provide services or education? Yes, please explain or No

- Yes, every other year
- Yes, Dental sealants every year
- Yes, Unicoi Health Dept. provides screenings & sealants yearly/ every other year.
- Yes, Regional Health send girls but are only here for a week or so
- Yes, every other year/ Health Dept.
- Yes, once yearly the “dental ladies” set up and see students.
- Yes, sealants
- No

Question 9: At what age do most children get their first permanent tooth? Five, Six, Seven, or Eight

- Four individuals chose age six.
- Two individuals chose age five.
- Two individuals chose age seven.

Question 10: Does poor oral health affect overall health? Yes, please explain or No

- Yes, Teeth problems can affect many parts of the body if they are not cared for.
- Yes, can lead to infections elsewhere. Also, there can be a link from health and hygiene to physical appearance, which can affect mental health as well

- Yes, poor oral health can affect appearance, ability to eat, sleep, can alter nutritional status, infection can cause systemic issues if untreated; can cause difficulty speaking, & affect self-esteem.
- Yes, infection, inflammation prevention; digestive system works better
- Yes, infections
- Three individuals only answered yes and did not explain.

Question 11: About how many school hours per year do American children miss because of dental related problems? 150,000; 500,000; 12 million; 52 million

- Two individuals answered 52 million
- Two individuals answered 12 million
- Two individuals answered 500,00
- One individual answered 150,000
- One individual answer I don't know

Question 12: Why do you think that children in a school system are at a higher risk for cavities or other oral health issues?

- They eat two meals per day at school without brushing or flossing at least until they get home from school. Children are exposed to a wide range of diseases and viruses in a school setting.
- Eating at school without access to toothbrush until getting home in the evenings.
- Bad eating habits, poor oral hygiene increased poverty levels.
- Soft drinks, poor hygiene
- Poor oral hygiene, poor nutrition

- Lack of education
- Question was not answered by one individual
- Economic statuses; little attention focused on oral health

Question 13: Why do you think dental hygienists are not more involved in school systems?

- I think for the most part they have not been more involved because they have not been invited or asked to. Also, most of them work long hours in private practice when school is in session.
- Financial reasons
- Limited resources/ funding; time constraints
- time. money & availability
- Because students have access to free dental care though the health dept.
- Funding
- 0 money
- Costs

Question 14: Do you think that your school system should have a dental hygienist on your school's campus? Explain why or why not.

- Yes. I think it would be very beneficial. Taking care of the oral health needs of our students would help remedy many of the other health issues so many of our students have to deal with.
- Possible yes; it just has to fit into financial plans.

- Not really- If we didn't have services available through the health dept, I could see that as being very beneficial though. It would be nice if we could have someone do some student & parent education at least once a year.
- Possibly for half of school year to check students & find the needs & notify parents; obtain consent & find dentist
- Yes, it would benefit all students. A dental hygienist could also provide proper and needed education.
- I think the school system could employ one hygienist and facilitate them throughout the system, if funding allows.
- Maybe a few times a month for children that have parents who are not able to take them for one reason or another.
- Oral health is important and should be focused on as much as other health areas.

Discussion

The correct answer for the first question was all services. Dental hygienists can perform dental screenings, referrals to dental offices or clinics, dental health education presentations, apply sealants, fluoride varnish or trays, provide nutrition education with regard to prevention of cavities, tobacco prevention education, tobacco cessation assistance, and can provide dental health education for parents and community. Tobacco prevention education and tobacco cessation assistance were among the top two services not chosen by the faculty and staff even though in Unicoi County 22.4% of adults are tobacco users (Sycamore Institute, 2018). One of the surveys had "not applicable" beside tobacco cessation education suggesting dental hygienists are not capable of performing this task or that this individual felt as though it was unnecessary for the students. The surveyed individuals may also have misinterpreted the question thinking of

only the services that could be or had already been performed at their school or the services they would prefer.

The school dental hygienist could also be a resource for the entire school community. Children in the elementary and middle school age range can be exposed to tobacco smoke through their parent or guardian. “Beyond the relatively undisputed carcinogenic risks, passive inhalation of tobacco smoke and its by-products is associated with increased school absenteeism, primary care interventions, and hospital admissions for various illnesses in childhood” (Montreuil et al., 2015, p.369). Understanding that children are at risk of tobacco and nicotine exposure presents a need for preventative educational services.

All eight individuals answered yes to question two, acknowledging a need for a dental hygienist at their school and were all in support of having a hygienist assigned to their school (question three). They showed preference toward having a school nurse as the main health provider for their students (question four). The participants suggested multiple barriers for the implementation of a part-time or full-time dental hygienist within the school system (question five). These included space/location for services that could be provided, equipment area, funding, cost, children’s fears, and parents’ hesitation. Most of these barriers were also mentioned in question 13. Even though funding was mentioned numerous times as a barrier (question 5 and 13), participants provided no insight into how to potentially fund a school dental hygienist.

All faculty and staff surveyed saw a need for the incorporation of a dental hygienist. Five individuals were very positive; three suggested less than full-time (questions four and 14). The participants understood that there is a link between oral health and overall health in question six.

Some of their answers included, “Oral health is a huge part of the overall health of a student. Teeth problems can cause all kinds of medical issues if they are not cared for in a timely manner” and “oral health can help prevent more overall health issues, such as infections.” Question ten went into more detail about the faculty and staff’s thoughts on how poor oral health affects overall health. Some of the individuals suggested that this can lead to infections elsewhere in the body, affect a person’s ability to eat, sleep, their nutritional status, difficulty speaking and self-esteem. Also, physical appearance was mentioned along with how it can affect metal health. Most faculty and staff had overall knowledge that oral health is important and that it impacts overall health, but answers suggest that there is more education to do in this area.

When asked, in question seven, do you currently have any interaction with a dental hygienist at your school, three of the eight staff members answered no. Seven faculty and staff members acknowledged a dental hygienist coming to their school and performing dental services, but only one individual gave the correct answer on who sends these hygienists, the Northeast Tennessee Regional Health Office.

At age six, most children get their first permanent tooth. This was the correct answer for question nine. Half of the individuals chose this answer. This question was included to see if the faculty and staff knew the information, but also to suggest the importance of early screening and referral.

Many school days are lost due to dental pain and oral discomfort. This was addressed in question 11, asking the participants how many school hours per year do American children miss because of dental related problems. Only two individuals answered 52 million hours which was

the correct answer. The other six grossly underestimated the impact of dental problems on school attendance.

Question 12 asked the participants their thoughts on why their students were at a high risk for cavities. They were able to give excellent examples such as poor oral hygiene, increased poverty levels, economic status, lack of education, and bad eating habits. "Dental caries is also characterized by profound disparities, in that children from families living below the federal poverty line (FPL) have twice the prevalence of dental caries than higher income children, with greater extent and severity of decay and a greater likelihood their disease will remain untreated" (Colaizzi et al. 2015, p. 180). Unicoi County has a higher poverty rate, lower educational attainment, and higher unemployment rate than the state of Tennessee and the US (Sycamore Institute, 2018). Median household income for Unicoi County is $35,390 which is over 11,000 dollars a year below the state average which is nearly $9000 below the US (Sycamore Institute, 2018). It is a relatively safe assumption that many children in Unicoi County are not getting seen by a dentist on a regular basis, given the fact that 21% live in families with incomes below the poverty level (Sycamore Institute, 2018). Northeast Tennessee Regional Health Office employs dental hygienists who visit area schools, providing sealants and referrals to local dentists. Unicoi County is among the seven counties served by three dental hygienists. It is unlikely that this limited number of public health hygienists can give all the students in seven counties the attention that they need. With the implementation of a school dental hygienist, students, who may not have access to a primary dentist or are not taken to the dentist twice yearly by a parent or guardian, could significantly benefit from this type of program.

Dental hygienists can be utilized for evaluation, education and referral purposes. "Dental caries (tooth decay) is among the most common chronic childhood diseases, ahead of asthma and

hay fever" (Colaizzi, 2015, p. 180). Hygienists can utilize fluoride which is necessary for remineralization and caries prevention. A school dental hygienist can be instrumental in early dental referrals before teeth are beyond saving. "Despite a recent decline in prevalence of caries in children, the federal government determined that by second grade, more than 50% of children will have caries, and this number increases to about 80% by the time a child finishes high school" (Moon et al., 2003, p.242). These eight individuals, while perhaps not representative of the entire school system, provided positive feedback toward the possibility of having a dental hygienist as part of their school or school system staff. Overall, they see the value that a dental hygienist could bring.

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Survey [Attachment A]

School: _____
Occupation Position: _____

1. Which of the following are services that a dental hygienist could perform in a school? Check all that apply.

   Dental screening _____
   Referrals to dental offices or clinics _____
   Dental health education presentations _____
   Apply sealants _____
   Apply fluoride varnish or trays _____
   Provide nutrition education with regard to prevention of cavities _____
   Tobacco prevention education _____
   Tobacco cessation assistance _____
   Provide dental health education for parents and community _____

2. Do you see a need for a dental hygienist at your school?
   Yes _____
   No_____ If no, why? _____

3. Would you be in support of having a dental hygienist assigned to your school?
   Yes _____
   No _____

4. What are your thoughts on having both a dental hygienist and nurse in your school's health clinic?

5. What barriers do you foresee with the implementation of dental hygiene services in public schools?

6. What are your thoughts of oral health compared to overall health?

7. Do you currently have any interaction with a dental hygienist at your school?
   Yes ___
   No ___

8. Do you currently have a dental hygienist coming to your school to provide services or education?
   Yes_____ please explain_____
   No _____

9. At what age do most children get their first permanent tooth?
   Five ___
   Six ___
   Seven _____
   Eight _____

10. Does poor oral health affect overall health?
    Yes ___ please explain_____
    No ___

11. About how many school hours per year do American children miss because of dental related problems?
    150,000 _____
    500,000 _____
    12 million _____
    52 million _____

12. Why do you think that children in a school system are at a higher risk for cavities or other oral health issues?

13. Why do you think dental hygienists are not more involved in school systems?

14. Do you think that your school system should have a dental hygienist on your school's campus? Explain why or why not.

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Informed Consent [Attachment B]

Principal Investigator's Contact Information: School Email: fenderh@etsu.edu
Phone: (423)-557-2515
Organization of Principal Investigator: East Tennessee State University

INFORMED CONSENT

This Informed Consent will explain about being a participant in a research study. It is important that you read this material carefully and then decide if you wish to voluntarily participate.

A. Purpose: The purpose of this research study is to examine the knowledge, opinion and understanding of selected school system employees about the oral health of elementary and middle school students.

B. Duration: The duration of the survey should take approximately five to ten minutes.

C. Procedures: This consent form was given to you by Hannah Fender. Once this consent form is signed, it will be placed inside a sealed envelope. A questionnaire/survey will then be administered to you by Hannah Fender, an ETSU student researcher. The survey will consist of a series of fourteen questions. When you have finished completing the survey, you will then give the survey back to Hannah Fender. Your survey will then go into a sealed envelope.

D. Possible Risks/Discomforts: The possible risks and/or discomforts from your participation in this research study include your job position and school name being traced back to you.

E. Possible Benefits: The possible benefits of your participation in this research study are no known benefits.

F. Compensation in the Form of Payments to Participant: There is be no compensation in the form of payment to the participants of this survey.

G. Voluntary Participation: Your participation in this research experiment is voluntary. **You may choose not to participate.** If you decide to participate in this research study, you can change your mind and quit at any time. If you choose not to participate, or change your mind and quit, the benefits or treatment to which you are otherwise entitled will not be affected. You may quit by calling Hannah Fender at (423)-557-2515. You will be told immediately if any of the results of the study should reasonably be expected to make you change your mind about continuing to participate.

H. Contact for Questions: If you have any questions, problems, or research-related problems at any time, you may call Hannah Fender at (423)-557-2515. You may also call the Chairperson of the ETSU Institutional Review Board at 423.439.6054 for any questions you may have about your rights as a research participant. If you have any questions or concerns about the research and want to talk to someone independent of the

research team or you can't reach the study staff, you may call an IRB Coordinator at 423.439.6055 or 423.439.6002.

I. **Confidentiality:** Every attempt will be made to see that your study results are kept confidential. Once the consent form is signed, it will be placed inside a sealed envelope. The survey, when completed, will be placed inside a separate sealed envelope. Both envelops will be in the position of and analyzed by Hannah Fender. A copy of the records from this study will be stored in Hutcheson Hall at East Tennessee State University, Room 103 with Dr. Deborah Dotson for at least 6 years after the end of this research. The results of this study may be published and/or presented at meetings without naming you as a participant. Although your rights and privacy will be maintained, the Secretary of the Department of Health and Human Services, the ETSU IRB, and Hannah Fender and his/her research team have access to the study records. Your records will be kept completely confidential according to current legal requirements. They will not be revealed unless required by law, or as described in this form.

By signing below, I confirm that I have read and understand this Informed Consent Document and that I had the opportunity to have them explained to me verbally. You will be given a signed copy of this informed consent document. I confirm that I have had the opportunity to ask questions and that all my questions have been answered. By signing below, I confirm that I freely and voluntarily choose to take part in this research study.

_____ _____

Signature of Participant Date

_____ _____

Printed Name of Participant Date

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